

## ABSTRACT

New compositions and methods for electrolytic deposition of metal layers, including metal traces, (e.g. circuit patterns) that are electrically segregated from adjacent traces in an electronic device, such as a semiconductor wafer or a printed circuit board. The invention includes providing the segregated traces by compositionally modulated plating methods, i.e. for example where a single plating bath (electrolyte) is employed to deposit two different metals at differing current densities or reduction potentials.

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